Model # AWLH3025

User's Manual

Ver. 1A

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REGULATORY STATEMENTS

FCC Certification

The United States Federal Communication Commission (FCC) and the Canadian Department of Communications have established certain rules governing the use of electronic equipment.

Part15, Class B

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

1) This device may not cause harmful interface, and

2) This device must accept any interface received, including interface that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

CAUTION:

1) To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.

2) This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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Table of Contents

INTRODUCTION **1**

WIRELESS NETWORK OPTIONS 1

The Peer-to-Peer Network (a.k.a. Ad-Hoc) 1

The Access Point Network (a.k.a. Infrastructure) 2

LED INDICATORS FOR WIRELESS NETWORK ADAPTER CARD 3

Power Indicator: (Green LED) 3

This LED will illuminate when the driver is installed 3

Act Indicator: (Green LED) 3

INSTALLATION **4**

INSTALL THE DRIVER & UTILITY 4

INSTALL THE DEVICE 7

Note for Windows 98 & ME users: 7

Note for Windows 2000 users: 7

Note for Windows XP users: 8

Verify Device Installation 9

CONFIGURATION **11**

ACCESSING THE CONFIGURATION UTILITY 11

MAIN TAB 12

ADVANCED TAB 17

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PRIVACY TAB 18
WEP Configuration 20
CCX Configuration 22
WPA settings 23
STATISTICS TAB 25
ABOUT TAB 26
UN-INSTALLATION 27
APPENDIX 29

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INTRODUCTION

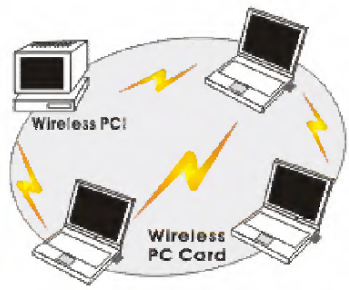
The **802.11g Wireless LAN Card** is a device that allows you to connect your computer to a Wireless Local Area Network (WLAN). A wireless LAN allows your system to use wireless Radio Frequency (RF) technology to transmit and receive data without having to physically attach to the network. The wireless protocols that come with this product ensure data security and isolation from interference generated by other radio frequencies.

This card also allows you to take full advantage of your computer's mobility with access to real-time information and online services anytime and anywhere. In addition, this device eliminates the hassle of pulling cable through walls and under furniture. It even allows you to place your system in locations where cabling is impossible. Modifying and augmenting networks has never been so easy.

Wireless Network Options

The Peer-to-Peer Network (a.k.a. Ad-Hoc)

This network installation lets you set a small wireless workgroup easily and quickly. Equipped with wireless PC Cards or wireless PCI cards, you can share files and printers between each PC and laptop.



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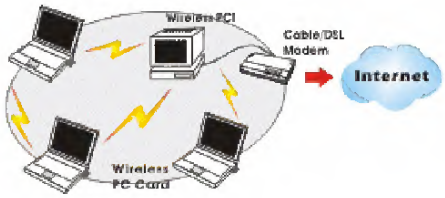
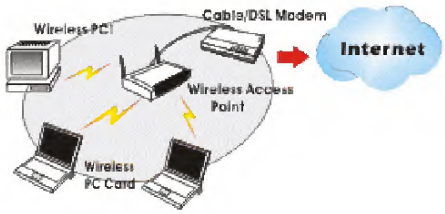
You can also use one computer as an Internet Server to connect to a wired global network and share files and information with other computers via a wireless LAN.



The Access Point Network (a.k.a. Infrastructure)

The network installation allows you to share files, printers, and Internet access much more conveniently. With the Wireless LAN Card, you can connect wirelessly to a wired global network via an access point or wireless router.



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LED Indicators For Wireless Network Adapter Card

Power Indicator: (Green LED)

This LED will illuminate when the driver is installed.

Act Indicator: (Green LED)

This LED flickers when the Wireless Network Adapter is transmitting/receiving data.

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INSTALLATION

Caution: Be sure to power off your computer before inserting the PCI adapter.

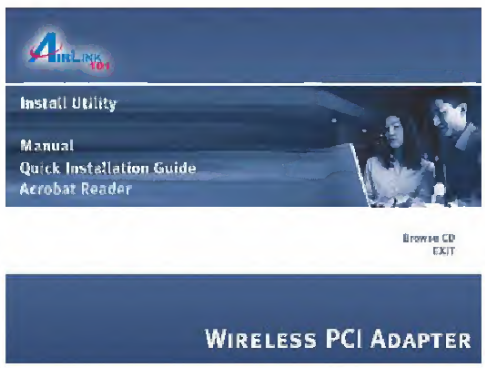
Install the Driver & Utility

Step 1 Insert the PCI adapter into an available PCI slot and turn on your computer.

Step 2 Windows will detect the adapter and request for a driver. Click **Cancel** to quit the wizard and insert the Installation CD into your CD drive.

Step 3 Select **Install Utility** from the setup menu.

Note: If the setup menu does not appear automatically, click **Start**, **Run**, type **D:\autorun.exe** (where **D** is the letter of your CD drive) and click **OK**.



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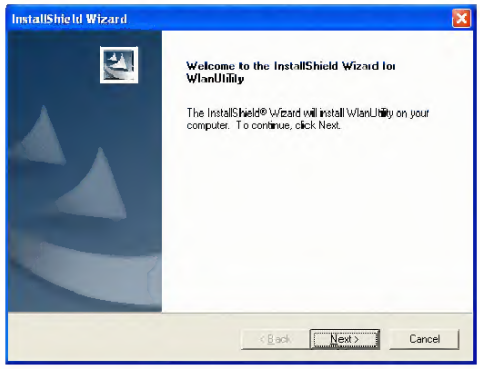
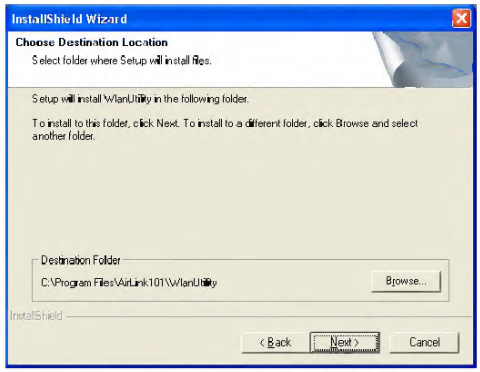
Step 4 When the Welcome screen appears, click **Next** .


InstallShield Wizard
Welcome to the InstallShield Wizard for WlanUtility
The InstallShield® Wizard will install WlanUtility on your computer. To continue, click Next.
< Back
Next >
Cancel

Step 5 Click **Next** to accept the default destination folder to install the software or click **Browse** to manually select a different destination folder.


InstallShield Wizard
Choose Destination Location
Select folder where Setup will install files.
Setup will install WlanUtility in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\AirLink101\WlanUtility
Browse...
InstallShield
< Back
Next >
Cancel

Step 6 Click **Next** at the Select Program Folder screen.

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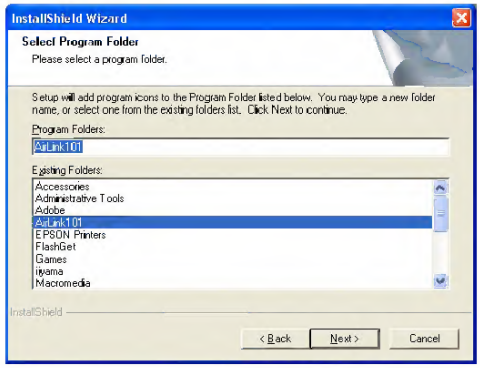

Step 7 Remove the Driver & Utility CD from your CD drive and then click **OK** to restart your computer.

Restarting Windows
Setup has finished copying files to your computer. Before you can use the program, you must restart your computer.
Choose one of the following options and click OK to finish setup.
Yes, I want to restart my computer now.
No, I will restart my computer later.
OK

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Install the device

Note Make sure the procedures in "**Install Utility**" have been performed. In most cases, Windows will automatically install the driver after the computer is restarted, if the Found New Hardware Wizard appears, follow the steps below.

Note for Windows 98 & ME users:

Before installing the device, make sure you have your Windows 98 or ME CD at hand. You may be asked to insert the Windows 98 or ME CD in order to install specific files.

Note for Windows 2000 users:

During the installation, when the "**Digital Signature Not Found**" screen appears, click "**Yes**" to continue.

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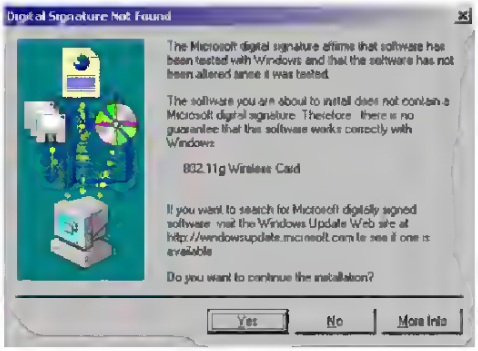
Digital Signature Not Found
The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.
The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.
802.11g Wireless Card
If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com/ to see if one is available.
Do you want to continue the installation?
Yes
No
More Info

Note for Windows XP users:

1. Select **Install the software automatically (Recommended)** and click

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
802.11g Wireless Card
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
Back
Next
Cancel

3. Click **Continue Anyway** at the Windows Logo testing screen.

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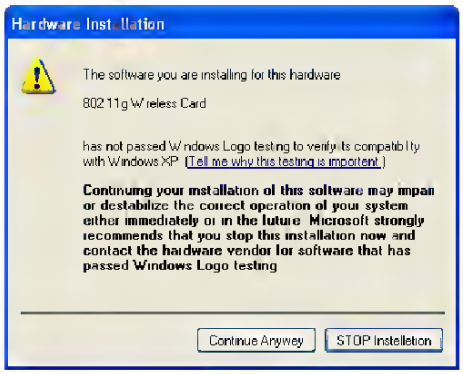
Hardware Installation
The software you are installing for this hardware:
802.11g Wireless Card
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

4 Click **Finish** to complete the installation

Verify Device Installation

To verify that the driver has been properly installed in your computer, go to **Start → Settings → Control Panel → System (→ Hardware) →**

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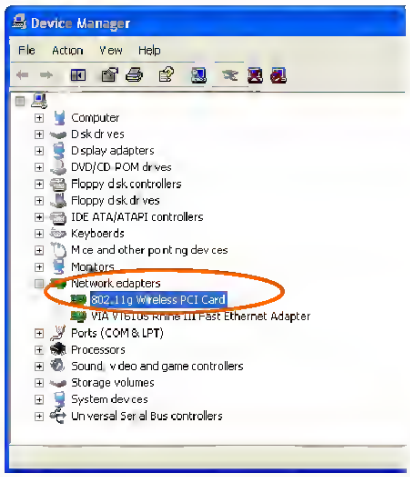
Device Manager. Expand the **Network adapters** item. If the **802.11g Wireless PCI Card** is listed, it means that your device is properly installed and enabled.



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CONFIGURATION

After successfully installing the driver and utility, a **Utility Icon** will appear on the desktop

If the Utility Icon doesn't appear automatically, go to **Start → (All) Programs → Airlink101 → Wireless LAN Utility**

Accessing the Configuration Utility

The Configuration Utility is accessed by double-clicking on the **Wireless LAN Utility Icon** on the Desktop

All settings are categorized into 5 Tabs

Main Tab

Advanced Tab

Privacy Tab

Statistics Tab

About Tab

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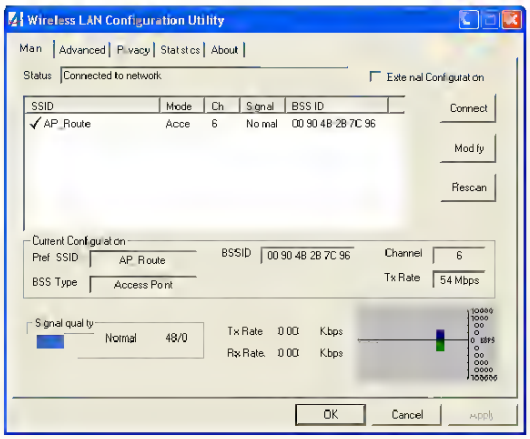
Main Tab

The **Main** tab displays the current status of the Wireless Network Adapter.



Item	Description
External Configuration	Uncheck the box to use this utility to configure the wireless network adapter. Or check the box to use Windows XP's Wireless Zero Configuration Utility.
Status	Displays the information about the status of the communication.
SSID	The **SSID** is the Network ID shared among all devices in your wireless network. The name must be identical for all devices and points attempting to connect to the same network. No encryption Encryption enabled For TI-Based WLAN

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Item	Description
	For TI-Based WLAN with encryption
Mode	Displays the type of connection Access Point or Peer-to-Peer
Ch	Displays the channel that is currently in use
Signal	Displays the signal strength of the connection between the Wireless Network Adapter and the Access Point it connects to
BBS ID	Displays the MAC address of the target device

Current Configuration

Pref. SSID	Shows the current SSID the wireless network adapter is connected to
BSS Type	Shows the current connection type Access Point or Peer to Peer
Channel	Shows the current channel
Tx Rate	Shows the current transfer rate
Signal Quality	Shows the signal strength of the connection between the wireless network adapter and the device it connects to
BSSID	The MAC address of the device that the wireless network adapter is connected to

Connect	Highlight one of the devices from the device list and press the Connect button to access it
Modify	There will be two tabs for you to modify, see the detailed information on next page
Rescan	Searches all available networks Clicking on this button, the wireless adapter will start to rescan and list all available devices

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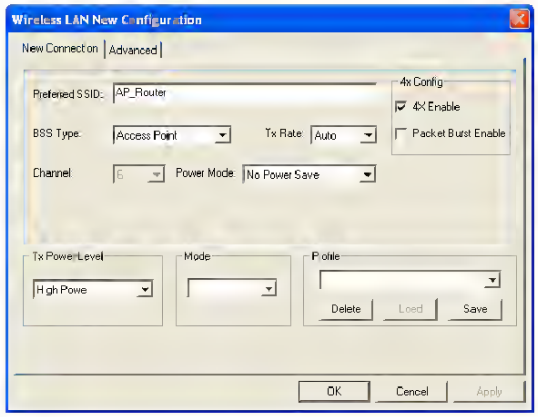

Preferred SSID	Type in the SSID name of the device you want to connect to
BSS Type	You can select the connection type **Peer-to-Peer**, **Access Point** or **Auto Mode**
Tx Rate	You can select the data rate or set to auto mode from the pull-down menu
Channel	Select the channel you want to use
Power Mode	**No Power Save** : the adapter will be in full active mode **Max Power Save :** the power save mode will be enabled
4x Config	Select to disable or enable the TI-Based 4x function
Packet Burst Enable	Enable this function (if the device you connect supports Packet Bursting Mode) to increase the efficiency of your network
Mode	Select from **IEEE 802.11b(B-Only)**, **802.11b +(B-Plus)** , **802.11g** (**G-Only**) or **B&G** Mode (If you choose this option the device will automatically convert the suitable standard)
Profile	Enter the profile name and click the **Save** button to save your configuration, To open the profiles you

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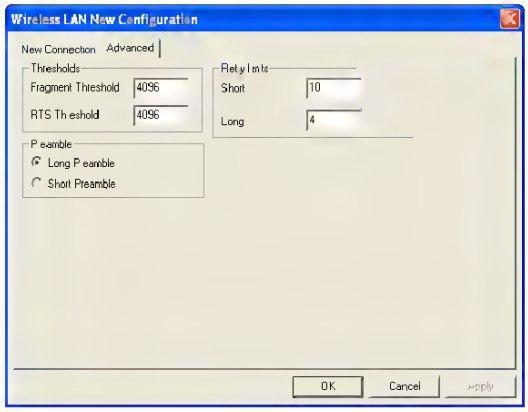
	saved, select the profile from the pull-down menu and then click the **Load** button.
Tx Power Level	Select the transmit power level **Low Power**, **Medium-Low Power**, **Medium Power**, **Medium-High Power**, **High Power** The power level function is used to extend the communication distance



Fragment Threshold	You can fragment the MSDU or MMPDU into smaller sizes to increasing the reliability of frame transmission (The maximum value of **4096** means no fragmentation is needed) The throughput performance will decrease however
RTS Threshold	This value should remain at its default setting of **4096** Should you encounter inconsistent data flow, only minor modification of this value is recommended
Preamble	A preamble is a signal used in wireless environment to synchronize the transmission timing, including Synchronization and Start frame delimiter (**Note** If you want to change the Preamble type to **Long** or

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	Short, please check the settings of your access point or wireless router.
Retry limits	You can set the number of retries if no acknowledgement appears from the receiving station

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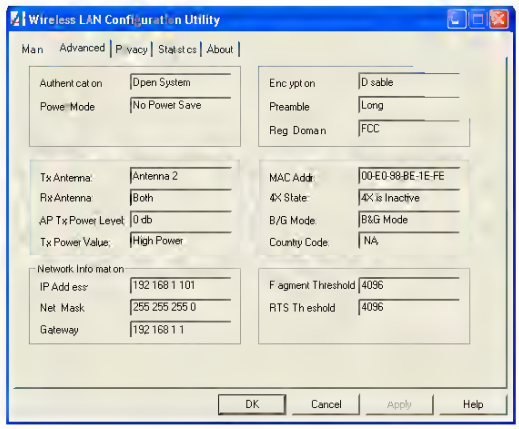
Advanced Tab

The **Advanced** tab displays the current status of the Wireless Network Adapter.



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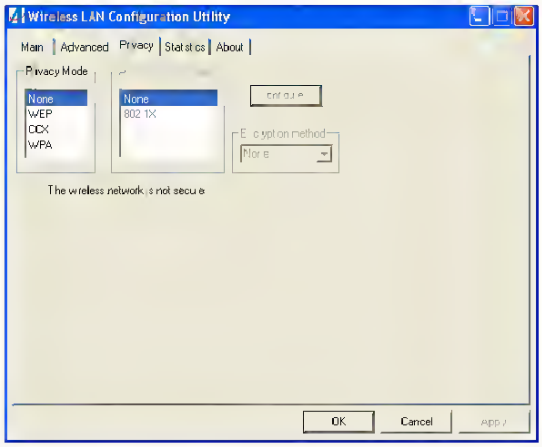
Privacy Tab

Use the **Privacy** Tab to configure your WEP, CCX and WPA settings. **WEP (Wired Equivalent Privacy), CCX (Cisco Compatible Extension) and WPA (WiFi Protected Access)** encryption can be used to ensure the security of your wireless network. Highlight WEP and click on the **Configure** button.

If you uncheck **External Configuration** in the Main tab, functions in the following figure will be enabled.



If you checked **External Configuration** in the Main tab, functions in the following figure will be disabled.

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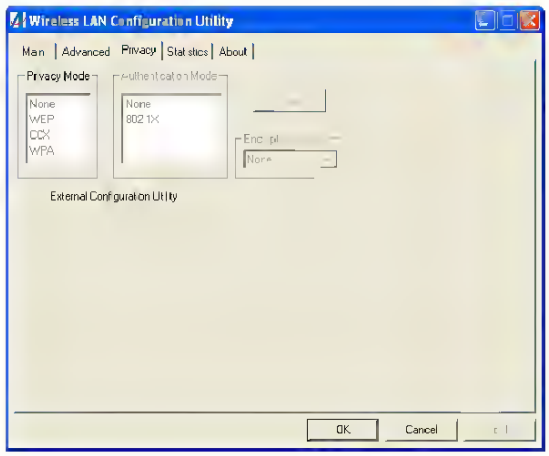

Privacy Mode	Configure **WEP, CCX, 802.1x** and **WPA** settings **NONE**：No security defined **WEP** is a data security mechanism based on a 40 Bit (a.k.a 64 Bit)/128 Bit/256 Bit shared key algorithm **WPA**（**WiFi Protected Access**）is more secure than WEP, and should be used if possible **CCX**（**Cisco Compatible Extension**）provides user-based, centralized authentication, as well as per-user wired equivalent privacy (WEP) session keys. Press the **Configure** button to change CCX configuration The **802.1x Configuration** window is used to configure WEP, CCX and WPA security with 802.1x authentication.

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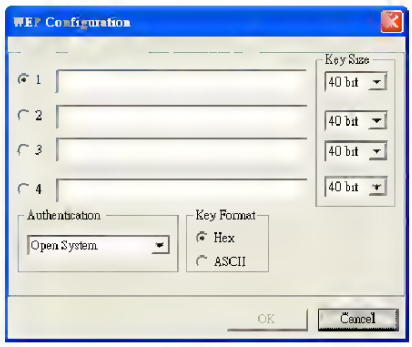
WEP Configuration

None :



Authentication	The authentication type defines ID verification and access privileges of roaming wireless network cards. You may choose from **Open System**, **Shared Key**, or **Auto Switch**. **Open System:** If your access point/wireless router is using **"Open System"** authentication, then the wireless adapter will need to be set to the same authentication type. **Shared Key**: **Shared Key** is when both the sender and the recipient share a secret key. **Auto Switch**: Select **Auto Switch** for the adapter to automatically select the appropriate authentication mode.
Encryption 1-4	**WEP (Wired Equivalent Privacy)** encryption can be used to ensure the security of your wireless network. Select one **Key** and **Key Size** then enter the appropriate key value in the **Encryption** field. ***Note*** *You must use the same* ***Key #, Key Size,*** *and* ***Encryption Key*** *on both the host and destination*

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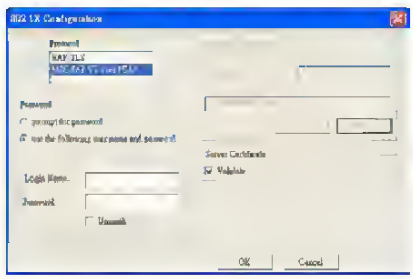
	devices in order to establish a connection **KEY1 ~ KEY 4 :** You can specify up to 4 different keys, but only one can be used at a time **Encryption :** Enter the key value in this field A key of **10** hexadecimal characters (0-9, A-F) is required if a **40-bit (a.k.a. 64-bit) Key Size** is selected A key of **26** hexadecimal characters (0-9, A-F) is required if a **128-bit Key Size** is selected A key of **58** hexadecimal characters (0-9, A-F) is required if a **256-bit Key Size** is selected
Key size	Select from **40-bit (a.k.a. 64-bit)**, **128-bit** or **256-bit**

802.1x Configuration

The **802.1x Configuration** window is used to configure WEP, CCX and WPA security with 802.1x authentication



Protocol	This panel enables you to select an authentication protocol
Password	This panel is available when EAP-TLS is not selected (either MSCHAP V2 over PEAP is selected with WEP or LEAP is selected for CCX) This panel enables you to enter a login name and password or request that the driver prompt for them when you connect to a

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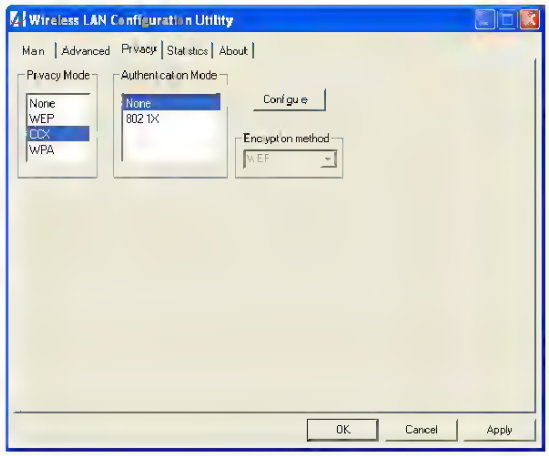
	network.
Personal Certificate	This panel is available when EAP-TLS protocol is selected and enables you to select a certificate for authenticating the station
User Name	Type in the user name assigned to the certificate
Browse	Select a certificate by clicking **Browse**
Server Certificate	You can select to enable or disable server certificate

CCX Configuration



None :

Refer to the previous section for **WEP** Configuration

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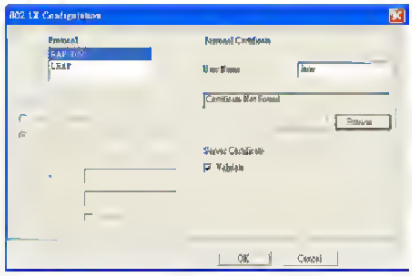
802.1x：

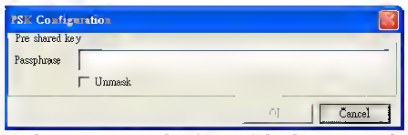


EAP-TLS	EAP-TLS is a mutual authentication method, which means that both the client and the server prove their identities.
LEAP	Network administers have been taking advantage of the simplified user and security administration that **LEAP** provides Before the security authentication is started, you should enter the **user name** and **password** or the authentication process will fail.

WPA settings

Preshared Key

Passphrase：



Enter the key that you are sharing with the network for the WLAN connection

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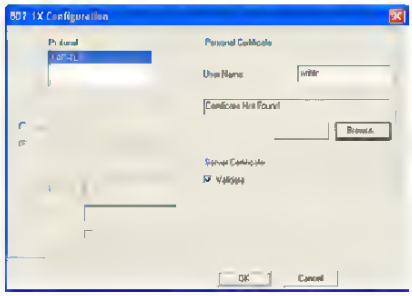
802.1x：

Refer to the previous section for 802 1x Configuration.



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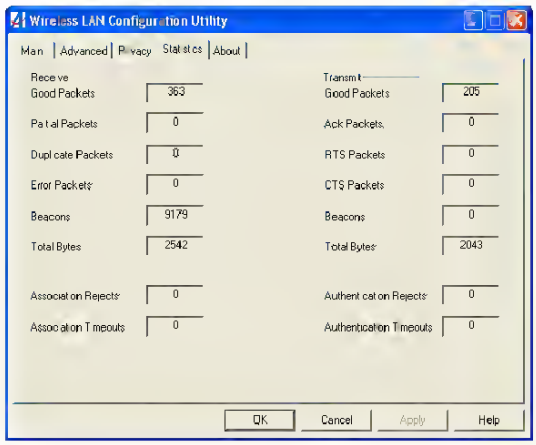
Statistics Tab

The **Statistics** Tab displays any available statistics including **Receive packets, Transmit packets, Association reject packets, Association timeout packets, Authentication reject packets,** and **Authentication timeout packets**



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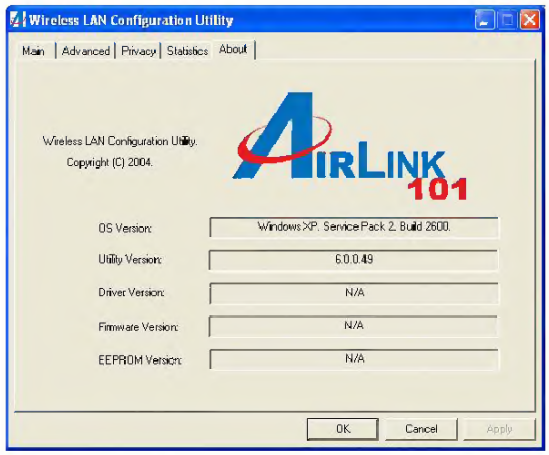
About Tab

Click on the **About** tab to view basic version information about the **OS Version, Utility Version, Driver Version, Firmware Version** and **EEPROM Version**.



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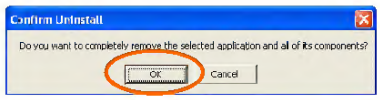
UN-INSTALLATION

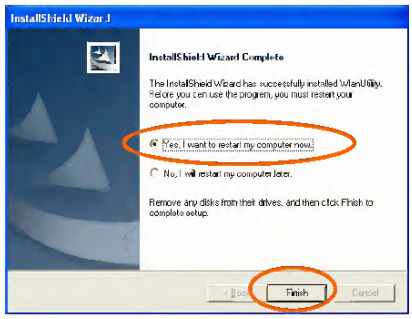
If you need to uninstall the driver and utility, follow the steps below.

(When you uninstall the utility, the driver will be uninstalled as well.)

1. Go to **Start → (All) Programs → Airlink101→ Uninstall Wireless LAN Utility.**
2. Click **OK** to continue.



3. Select **Yes, I want to restart my computer now**, and then click **Finish** to complete the uninstalled procedure.


InstallShield Wizard
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed WlanUtility. Before you can use the program, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
Finish
Cancel

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Appendix

Technical Support

E-mail: support@airlink101.com

Toll Free: 1-888-746-3238

Web Site: www.airlink101.com

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